Initial Validation of the Social Emotional Distress Survey-Secondary to Support Complete Mental Health Screening

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Abstract

Contemporary mental health assessment conceptualizations focus on both wellbeing and distress. This study presents initial validation information for the *Social Emotional Distress Survey* – *Secondary* (SEDS-S), which was designed for school-based complete mental health screening that employs brief self-report measures of wellbeing and distress. The SEDS-S structure was investigated using two independent samples of U.S. high school students (N = 3,780). Findings from exploratory and confirmatory factor analyses suggested a one-factor model of distress with good model fit. Path analyses revealed significant positive relations of the SEDS-S distress factor with symptoms of anxiety and depression, and a significant negative relation with life satisfaction and strengths scores. Future research directions and use in school-based screening applications are discussed.

Keywords: Social Emotional Distress Survey, covitality, complete mental health, school, screening

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Significant progress has been made towards a robust understanding of mental health, inclusive of both the absence of distress symptoms and the presence of positive health indicators (Greenspoon & Saklofske, 2001; Keyes, 2002). This conceptualization of mental health recognizes that the absence of distress alone is insufficient to assume wellbeing, and that it is necessary to focus on social-emotional strengths and assets (Scales, 1999). Dual-factor, or two-continua mental health models propose that positive (e.g., subjective wellbeing, social-emotional strengths) and negative (e.g., internalizing or externalizing distress) mental health indicators are related, yet distinct constructs and that both need to be considered when assessing the mental health functioning of youths (Suldo & Shaffer, 2008).

Concurrent with this expanded conceptualization of mental health, there has been an increased understanding of the need to proactively and universally assess youth's mental health in schools (Kamphaus, Reynolds, & Dever, 2014). Considering research highlighting the variety of negative educational and life outcomes associated with mental health problems (e.g., Bradley, Doolittle, & Bartolotta, 2008), universal school-based screening has been proposed as an essential first step towards identifying the mental health needs of students (Glover & Albers, 2007). Then, data-based decisions can be made to inform prevention, early intervention, and promotion efforts to relieve symptoms of distress and foster youths' thriving (Furlong, Dowdy, Carnazzo, Bovery, & Kim, 2014). Complete mental health screening is a contemporary approach to early identification that is aligned with dual-factor, expanded definitions of mental health (Furlong, You, Renshaw, Smith, & O'Malley, 2014). In this screening approach, symptoms of distress and indicators of strengths are both assessed to provide a comprehensive picture of

youth's mental health functioning. When assessing youth's mental health functioning, it is essential to ask the students themselves about the positive and negative aspects of their life experiences (Furlong et al., 2014). Additionally, students are generally viewed as the best informants when measuring internalizing symptoms or their own perceptions or feelings (Dowdy & Kim, 2012). Complete mental health screening via student self-report provides a structured opportunity for students to provide information about their wellbeing.

Approaches to complete mental health screening have generally involved coadministering multiple measures, with at least one measure focused on symptoms of distress and another focused on the presence of strength indicators (Moore et al., 2015). Following administration of multiple measures, youth are then grouped into various categories often consisting of four groups including youth who report: (a) high symptoms of distress and low strengths (often referred to as troubled), (b) low symptoms of distress and high strengths (flourishing, complete mental health), (c) high symptoms of distress and high strengths (symptomatic but content), and (d) low symptoms of distress with low strengths (vulnerable, languishing). There are significant differences in the approaches to classification into dual-factor groups, including cut score approaches based on published or local norms (Greenspoon & Saklofske, 2001), using predetermined criteria to place a certain percentage of the sample in various categories (Suldo & Shaffer, 2008), use of z-scores to classify students in groups (Furlong et al., 2014), or latent class approaches to group students into empirically derived categories (Kim, Dowdy, Furlong, & You, 2017). Despite variation in classification approaches, this dual-factor model has been empirically supported across a variety of samples and studies showing significant educational, social, and life outcome differences between these four mental health groups (e.g., Antaramian et al., 2010; Suldo & Shaffer, 2008).

In addition to the variation in classification approaches, the instrumentation used to assess for complete mental health has varied widely. For example, Greenspoon and Saklofske (2001) used the Behavioral Assessment System for Children-Second Edition (BASC-2: Kamphaus & Reynolds, 2007) to assess for distress, and the Multidimensional Life Satisfaction Scale (MSLSS; Huebner, 1994) to assess for strengths, Dowdy et al. (2014) used the Behavioral and Emotional Screening System (BESS; Kamphaus & Reynolds, 2007) to assess for distress, along with the Social Emotional Health Survey-Secondary (SEHS-S; Furlong et al., 2014) to assess for personal strengths. Additionally, Suldo and Shaffer used the Achenbach System of Empirically Based Assessment (ASEBA; Achenbach & Rescorla, 2001) as a measure of distress and combined scores from the *Positive and Negative Affect Scale for Children* (PANAS-C; Laurent et al., 1999) and the Students' Life Satisfaction Scale (SLSS; Huebner, 1991) as a measure of subjective wellbeing. Although there are a variety of instruments available to measure both distress and strengths, the continued and likely sustained interest in complete mental health screening necessitates instruments that are efficient, freely available, coadministered, and with sound psychometric properties.

The SEHS-S is a strengths-based measure that has been widely supported and validated for use within a complete mental health screening context (e.g., Furlong et al., 2014; You, Furlong, Felix, & O'Malley, 2015). Empirical support exists for a higher-order model consisting of a total covitality score that can be efficiently used in complete mental health screening; covitality is defined as the counterpart to comorbidity and conceptualized as "the synergistic effect of positive mental health resulting from the interplay among multiple positive-psychological building blocks" (Furlong et al., 2014; p. 1013). Although the SEHS-S has been co-administered with a variety of distress measures, including the BESS and the *Strengths and*

Difficulties Questionnaire (SDQ; Goodman, 1999), a companion distress measure that is designed specifically for use in complete mental health screening is needed. This manuscript reports on the initial validation of a population-based distress measure, the *Social Emotional Distress Survey—Secondary* (SEDS-S) to be co-administered along with the SEHS-S to efficiently accomplish complete mental health screening. As opposed to other brief measures, the goal of the SEDS-S is not to measure syndrome patterns, but to broadly assess youth personal emotional distress within the school context. This approach presumes that such a measure is an initial screening assessment that would inform follow-up assessment with more traditional diagnostic tools that provide clinical diagnostics. Also, given the importance of having measures that have psychometric properties evaluated with the same sample, the SEDS-S was designed to be co-administered with the SEHS-S. Specifically, as construct validity is a primary objective in measure development (Clark & Watson, 1995), this study was designed to examine the structural and external validity evidence in support of the SEDS-S.

Method

Participants

Participants were students from two high schools in different school districts in central California. Students attending School 1 comprised a development sample and students attending School 2 comprised a validation sample. At each school, the survey was administered during schoolwide universal screening. Participants at School 1 (N = 1,889,68.9% of total student enrollment) consisted of 30.4% in Grade 9, 24.2% in Grade 10, 25.2% in Grade 11, and 20.1% Grade 12. Students' self-reported cultural group/ethnicity were as follows: 77.7% Latinx or Hispanic, 6.3% White, 3.4% Asian, 1.2% Black or African American, 1.4% Native Hawaiian or Pacific Islander, 0.4% American Indian or Alaskan Native, and 9.5% Mixed (two or more

ethnicities). Approximately 52% of students identified as female, 46.2% identified as male, 1.6% reported another gender identification, and one student elected not to identify. Of participants at School 2 (*N* = 1,891, 87.1% of total school enrollment), 26.4% were in Grade 9, 26.1% in Grade 10, 25.1% in Grade 11, and 22.5% in Grade 12. Students self-reported as: 48.7% Latinx or Hispanic, 38.2% White, 3.1% Asian, 1.3% Black or African American, 0.7% American Indian or Alaskan Native, 0.5% Native Hawaiian or Pacific Islander, and 7.4% Mixed (two or more ethnicities). At School 2, 50.7% identified as female, 47.9% as male, and 1.4% as another gender identification. One student elected not to identify their gender and two students elected not to identify their ethnicity. Demographic information of the participating students was similar to overall school demographics. Additional descriptive information was only available at the school level. In the year the survey was administered, at School 1, 23.9% of students were classified as English Learners, 73.6% were eligible for free/reduced-price meals, and the graduation rate was 95.7%. At School 2, 14.2% of students were classified as English Learners, 39.2% were eligible for free/reduced-price meals, and the graduation rate was 94.0%.

Measures

Social and Emotional Distress Survey–Secondary (SEDS-S). The SEDS-S is a 10-item behavioral screening questionnaire designed to measure internalizing distress. Student's pastmonth symptoms of internalizing distress were measured using a 5-point response scale (1 = not true of me, 2 = a little true of me, 3 = pretty much true of me, 4 = true of me, 5 = very true of me). To establish substantive validity, clinical literature and existing longer distress measures (e.g., SDQ; BESS; Depression, Anxiety, and Stress Scales – 21) were examined to inform the development of items. A primary aim was to have a measure that asked students to comment on their internal psychological experiences as they relate to sad (e.g., In the past month, I felt sad

and down), and anxious (e.g., In the past month, I was scared for no good reason) emotional experiences and which could produce a unidimensional measure. The aim was not to differentiate between sad and anxious constructs, but to develop a measure that provided a meaningful overall assessment of internal emotional distress, which is most appropriate for a universal school-based screening tool. Consistent with the goal of efficiency in screening, the aim was to have a measure that provided an index of a student's overall level of emotional distress that could be used to prioritize the planning of follow-up assessment and support services. We specifically sought fewer items than existing pathology focused screening measures, and with language appropriate for adolescent students. Internal consistency estimates for the current samples were high ($\alpha_{School 1} = .91$, $\alpha_{School 2} = .91$).

Social and Emotional Health Survey–Secondary (SEHS-S). Furlong et al. (2014) developed the SEHS-S, a 36-item strength-based measure, to assess 12 positive social-emotional constructs (three items per construct) with adolescents, grades 7 to 12. The SEHS-S was initially validated with students in grades 8, 10, and 12 (N = 4,189) from 12 schools in central California (Furlong et al., 2014). The SEHS-S has 12 subscales that load onto four mindsets: Belief-in-Self (i.e., self-awareness, persistence, self-efficacy), Belief-in-Others (i.e., peer support, teacher support, family support), Emotional Competence (i.e., empathy, emotional regulation, delay of gratification), and Engaged Living (i.e., gratitude, zest, optimism). These four mindsets combine to create an overall *covitality* score, which represents combined positive psychological dispositions. Student's social emotional health was assessed using a 6-point response scale (1 = very much unlike me, 2 = unlike me, 3 = somewhat unlike me, 4 = somewhat like me, 5 = like me, 6 = very much like me). Items are summed to create an overall total score (M = 169.60, SD = 24.75 for School 2). Psychometric properties for the SEHS-S are strong including evidence of

the reliability and validity of the higher-order model, internal consistency, construct and predictive validity, and invariance across sociocultural groups and gender (Furlong et al., 2014; You et al., 2014, 2015). For School 2, internal consistency was high (α = .95).

Brief Multidimensional Student Life Satisfaction Scale (BMSLSS). The BMLSS (Seligson, Huebner, & Valois, 2003) is a five-item self-report measure of youths', ages 8-18, life satisfaction across five domains (i.e., friends, family, self, school, and living environment). Initial validation of the BMSLSS took place with public high school students from South Carolina (N = 5,545) in grades 9 through 12 (Huebner, Drane, & Valois, 2000). Respondents' ratings across the five-areas contribute to an overall life satisfaction score. Students indicate how their degree of satisfaction using a five-point response scale ($1 = very \ dissatisfied$ to $5 = very \ satisfied$). A mean score was computed to indicate total life satisfaction, with higher scores indicating greater overall life satisfaction. Previous research with the BMSLSS has yielded acceptable internal consistency estimates with adolescents ($\alpha = .75-.83$; Funk, Huebner, Valois, 2006; Ng et al., 2017; Zullig, Valois, Huebner, Oeltmann, & Drane, 2001). The internal consistency estimate for School 2 was adequate ($\alpha = .79$).

Patient Health Questionnaire Depression Scale (PHQ-9). The PHQ-9 (Kroenke, Spitzer, & Williams, 2001) is a self-report measure designed to assess symptoms of depression, originally intended for use in medical contexts. The nine items correspond to nine Diagnostic and Statistical Manual of Mental Disorders (DSM) criteria for depression. Individuals indicate how frequently they have experienced symptoms of depression over the past two weeks using four-point response options (0 = not at all, 1 = several days, 2 = more than half the days, 3 = nearly every day). Eight items were the focus of the present study. One item (item 9, Thoughts that you would be better off dead or hurting yourself in some way) was not included in the

current study due to school administrators' concerns about their ability to promptly respond to students who endorsed this item. Research supports the equivalency of the PHQ-9 and an abbreviated PHQ-8 (excluding item 9), with high correlations between the two scales (r = .997) and similar receiver operating characteristic (ROC) area under the curve results indicating the same cutpoints may be used for both measures (Kroenke et al., 2009). Mean scores were used in analyses as an indicator of symptoms of depression. Although originally developed for use with adults in primary care settings, the PHQ-9 has been used with youth aged 12 to 18 (Richardson, McCauley, & Katon, 2009; Richardson et al., 2010) and is preferred over the adolescent version of the PHQ (i.e., PHQ-A; Zukerbrot & Jenson, 2006), as the PHQ-9 offers information regarding severity of depressive symptoms. Internal consistency reliability, and sensitivity and specificity estimates, are adequate ($\alpha = .86$ to .89; Kroenke et al., 2010). For School 2, the internal consistency estimate for the eight items of the PHQ-9 was high ($\alpha = .88$).

Generalized Anxiety Disorder Scale (GAD-7). The GAD-7 (Spitzer, Kroenke, Williams, & Löwe, 2006) is a seven-item self-report measure designed to assess symptoms of generalized anxiety, panic, social anxiety, and post-traumatic stress disorder. Individuals indicate how frequently they have experienced symptoms of anxiety over the past two weeks using four-point response options ($0 = not \ at \ all$, $1 = several \ days$, $2 = more \ than \ half \ the \ days$, 3 = nearly every day). Mean scores on the GAD-7 were used in analyses as an indicator of youth's symptoms of anxiety. Initially developed with adults (age 18-95 years) in primary care settings (Spitzer et al., 2006), the GAD-7 has been used with adolescents (ages 14+; Löwe et al., 2008). Internal consistency of the GAD-7 with adolescents at School 2 was high ($\alpha = .91$).

Procedure

Consistent with complete mental health screening approaches, data using both negative

(SEDS-S) and positive (SEHS-S) indicators of mental health were collected. In the spring of the 2015/2016 school year for School 1, all students attending these schools were invited to participate. Following the university human subjects committee approval, passive parental consent, and student assent, the students used individual tablets to complete an online survey. Items were formatted using Qualtrics® with items formatted three per page and presented in a unique random order within each measure for each student. All surveys were completed in one day.

Similar procedures were followed for students in School 2 who completed the survey in the fall of the 2015/2016 school year. Because the students at School 2 did not have individual tablets, surveys were completed over three weeks during the beginning of the school year. In addition to the screening survey inclusive of the SEHS-S and the SEDS-S, students in School 2 also completed a measure of life satisfaction (BMSLSS), anxiety (GAD-7), and depression (PHQ-9) for external validity analyses. At School 2, if students were absent during the initial screening period, up to five attempts were made to allow the student to complete the survey. At both schools, scripts were provided to teachers who proctored the administration of the measures to explain the purpose and use of the screening results.

Analysis

Split-sample EFA/CFA on School 1 and secondary split-sample EFA/CFA with newly generated random samples of School 1 were conducted to guard against sample-specific EFA/CFA results (Van Prooijen & Van, 2001). Five structural analyses were completed to examine the underlying factor structure of the SEDS-S: (a) initial exploratory factor analysis (EFA; using a 50% random sample of School 1 participants), (b) confirmatory factor analysis (CFA, using a 50% random sample of School 1 participants), (c) EFA using a different 50%

random sample of School 1 participants, (d) CFA using a different 50% random sample of School 1 participants, and (e) a cross-validation CFA using all School 2 participants. Analyses were performed using Mplus software version 7.4 (Muthén & Muthén, 1998-2015) with maximum likelihood (ML) estimation. An oblique geomin rotation was performed for both EFAs to allow for possible correlation among factors, as symptoms of internal distress frequently fit under separate constructs of depressed and anxious emotionality. In addition to substantive and theoretical meaning, parallel analysis, standardized root-mean-square residual (SRMR) fit index, comparative fit index (CFI), and factor loadings were given the most weight. SRMR values below .08 and CFI values of .90 or above indicate adequate absolute and comparative model fit, respectively (Hu & Bentler, 1999). Factor loadings of .30 or above were considered adequate.

Using responses from the School 2 participants, we examined convergent and discriminant validity of the SEDS-S, a structural path model was specified to include relations between the SEDS-S overall distress factor and the mean scores for SEHS-S covitality, BMSLSS life satisfaction, PHQ-9 depression symptoms, and GAD-7 anxiety symptom scores. Model fit was similarly assessed using the criteria specified above.

Results

Exploratory and Confirmatory Factor Analyses

Initial split-sample EFA/CFA with school 1. Using the first School 1 subsample, initial EFA was performed with 10 variables for one to four factors, with fit indices and factor loadings compared for model fit and simple structure. Bivariate correlations did not indicate multicollinearity between items, r = .38-.60. Mean values ranged from M = 1.81 (a little true of me) to M = 2.70 (pretty much true of me). Parallel analysis supported a one-factor solution. Results suggested the one-factor solution was a good fit, SRMR = .03 and CFI = .97. Factor

loadings were strong for all items (λ = .59 – .81). Although fit statistics indicated good model fit for two-, three-, and four-factor models, these models had several cross-loadings and were not substantively or theoretically supported. A one-factor solution was chosen for further analyses. Results of CFA supported a one-factor model, SRMR = .03 and CFI = .97. Factor loadings remained strong (λ = .61–.77). Latent-level reliability for the SEDS-S internalizing problems factor was strong (ω = .91).

Secondary split-sample EFA/CFA with school 1. To validate the findings from initial split-sample EFA/CFA, a split-sample EFA/CFA was conducted with different 50% subsamples of School 1. Results for model fit were identical to findings from initial split-sample EFA/CFA, SRMR = .03, CFI = .97, and factor loadings were strong, (λ = .62–.81). Similarly, reliability for the SEDS-S internalizing problems factor remained strong (ω = .91).

Cross validation analysis with school 2. An additional CFA of the one-factor model was conducted using the School 2 sample. Results indicated adequate model fit, SRMR = .04, CFI = .93. Results with the School 2 sample were consistent with the results from the School 1 EFA and CFA analysis; item loadings onto the distress factor were strong (λ = .61–.77) and latent-level reliability was strong (ω = .91). For ease of comparison, item-level descriptive statistics for School 1 and School 2 are presented in Table 1.

Convergent and Discriminant Validity

To examine the associations among the SEDS-S distress factor and positive and negative mental health indicators a structural model was conducted from the total distress factor to the covitality, life satisfaction, anxiety, and depression outcome variables. Table 1 presents descriptive statistics for each indicator of mental health. Results of the path analyses revealed significant positive relations of the SEDS-S total distress score with the GAD-7 anxiety

symptoms (R^2 = .64) and the PHQ-9 depression symptoms (R^2 = .57) and a significant negative relation with the SEHS-S total covitality score (R^2 = .14) and BMSLSS life satisfaction (R^2 = .28), with the overall model having adequate fit to the data, χ^2 = 1015.20, df = 71, p < .001; SRMR = .04; RMSEA = .08, 90% CI [.08, .09]. Figure 1 presents the standardized coefficients of the path model.

Discussion

In support of complete mental health screening, this study examined initial psychometric properties of the SEDS-S, a measure designed to assess self-reported internalizing distress. Specifically, this study sought to examine the structural and external validity evidence for the SEDS-S as a first step in evaluating its use as a school-based screening instrument for use with high school students. Results of exploratory and confirmatory analyses across five samples (i.e., four randomly split subsamples, one independent sample) support adequate model fit for a onefactor solution indicating that the SEDS-S measures an overall construct of internalizing distress. Convergent validity evidence was investigated via path analyses, which revealed significant positive relations of the SEDS-S distress factor with measures of anxiety and depression. Examination of effect size coefficients (i.e., R^2) supported moderately strong to strong effects of SEDS-S distress on the PHQ-9 and GAD-7, respectively, indicating that the distress construct measured by the SEDS-S is congruent with the depression and anxiety constructs measured by these scales. Similarly, evidence for discriminant validity was provided by path analyses results indicating a significant negative relation between the SEDS-S distress factor and a measure of life satisfaction and covitality. Effect size coefficients supported small to moderate effects of the SEDS-S distress on the SEHS-S and BMSLSS, respectively. Congruent with the complete mental health framework, these results indicate that SEDS-S distress is discrete from, yet related

to, covitality and life satisfaction.

Overall, as expected, the SEDS-S is significantly positively related to important indicators of distress and significantly negatively related to important indicators of strengths. This is important as the primary measures for use in complete mental health screening assess both the positive and negative indicators of mental health. Considering that the distress measures used within the dual-continua research are often omnibus, comprehensive measures (e.g., the ASEBA), the brevity of the 10-item SEDS-S may be beneficial to practitioners and researchers who are trying to accomplish population-based universal screening in an efficient manner. The SEDS-S may be an alternative measure, related to clinical indicators, that could assess students' self-reported internalizing distress. Coupled with the SEHS-S or another measures of positive mental health, this can provide an efficient way to accomplish school-based complete mental health screening.

As with all studies conducted with convenience samples, this study has limitations, with respect to the generalizability of the results. The samples were limited in terms of diversity and geographic characteristic with a majority Latinx sample from two schools in central California. Replication with larger, diverse samples is needed. Additionally, this examination of structural and external validity evidence does not encompass all important areas of psychometric investigation. For example, measurement and structural invariance across different ages, ethnicities, and genders is still needed. Also, only a few measures of convergent and divergent validity were provided; however, it is important to assess relations with other outcomes and with comprehensive criterion measures. Specifically for use within a school-based screening context, it will be important to assess the relations with longitudinal educational (e.g., grades; attendance; dropout) and mental health outcomes (e.g., mental health diagnoses). Examinations of the

stability of SEDS-S scores are also needed to help further inform their use in prevention and early intervention planning. Due to all measures being self-report, this study is also susceptible to monomethod bias; future studies may consider external criteria or additional raters. The content of the SEDS-S is also limited to a primary focus on symptoms of anxiety and depression. This is consistent with its design as a general distress measure; however, we acknowledge that alternative measures of internalizing distress may encompass other important constructs or symptoms of distress, such as stress reactivity, somatic symptoms, loneliness, or self-esteem. We also acknowledge, as intended in the original design, that its use is limited to a screening context, and is not intended to be a diagnostic measure.

For use within complete mental health screening, it will be most advantageous to have measures of both distress and strengths that are co-normed. This study provides a first step in that direction by providing initial validity evidence in support of the SEDS-S as a measure of internalizing distress. Future research to co-norm the SEDS-S with a measure of positive mental health, such as the SEHS-S, can now be undertaken. Then, additional research investigating the potential for both measures to yield actual meaningful mental health groups, along with an examination of the advantages and limitations of alternative categorization procedures is needed. This systematic program of psychometric research will be important as schools move towards proactively and universally assessing youth's mental health using expanded conceptualizations of mental health (Moore et al., 2015). Overall, this study sought to provide continued support for complete mental health screening by providing initial validity evidence in support of the SEDS-S, as measures with strong psychometric support are the foundation of assessment and intervention practice.

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Table 1

Item Level Descriptive Statistics of Observed Variables for School 1 and School 2

| Measure | M(SD) | Minimum | Maximum | Skewness (SE) | Kurtosis (SE) |
|----------|------------|---------|---------|---------------|---------------|
| School 1 | | | | | |
| SEDS-S | 2.31 (.99) | 1.00 | 5.00 | 0.71 (.06) | -0.32 (.11) |
| School 2 | | | | | |
| SEDS-S | 1.93 (.86) | 1.00 | 5.00 | 1.16 (.06) | 0.88 (.11) |
| SEHS-S | 4.71 (.69) | 1.00 | 6.00 | -0.98 (.06) | 2.74 (.11) |
| BMSLSS | 4.96 (.83) | 1.00 | 6.00 | -1.27 (.06) | 2.12 (.11) |
| PHQ-9 | 1.57 (.62) | 1.00 | 4.00 | 1.45 (.06) | 1.92 (.11) |
| GAD-7 | 1.56 (.69) | 1.00 | 4.00 | 1.61 (.06) | 2.26 (.11) |

Notes. Item-level descriptive statistics are reported for each measure. SEDS-S = Social Emotional Distress Survey-Secondary; SEHS-S = Social Emotional Health Survey-Secondary; BMSLSS = Brief Multidimensional Student Life Satisfaction Scale; PHQ-9 = Patient Health Questionnaire-9; GAD-7 = Generalized Anxiety Disorder Scale-7

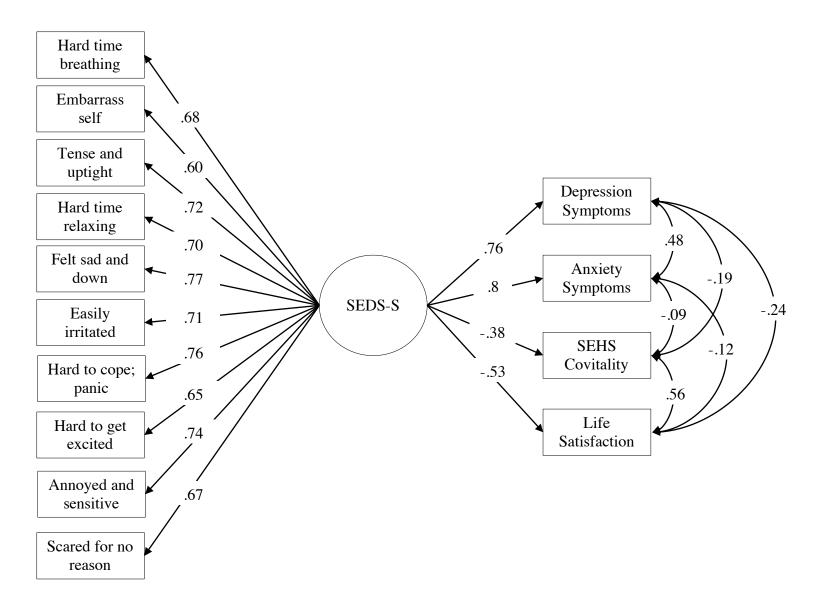


Figure 1. Social Emotional Distress Scale-Secondary convergent and discriminant validity model. Path coefficients are completely standardized; all paths are significant at p < .001.